



UNITED STATES PATENT AND TRADEMARK OFFICE

17c  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,915	02/13/2001	Kenneth G. Noggle	00-003	3193

7590 12/31/2002  
BURNS, DOANE, SWECKER & MATHIS, LLP  
P.O. BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER

ROSS, DANA

ART UNIT	PAPER NUMBER
----------	--------------

3722

DATE MAILED: 12/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/782,915

Applicant(s)

NOGGLE, KENNETH G. *ad*

Examiner

Dana Ross

Art Unit

3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 20-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 20-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This is a second office action, non-final rejection on application #09/782915 in response to the amendment filed on December 9, 2002.

#### ***Specification***

2. The objections to the specification have been withdrawn because of the amendment to the specification filed on Dec. 9, 2002.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regard as his invention.

4. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regard as the invention.

Claim 20, line 2, recites the limitation "said tool body". There is insufficient antecedent basis for this limitation in the claim.

5. The rejection of claims 3, 4, 6, 13, 14 and 18 insufficient antecedent basis for the limitations in the claims are withdrawn because of the amendment to the specification filed on December 9, 2002.

#### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-7 and 20 have been considered but are moot in view of the new ground(s) of rejection.
7. Claims 8-19 have been cancelled and new claims 21-32 inserted.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-3, 5-7, 20-22, 25-26 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,391,023 (Basteck). Basteck teaches a cavity 31 (col. 2, lines 60-63, fig. 2) in a holder 12 (col. 2, lines 26-29, fig. 2) at least a portion of the cavity 31 contiguous with the pocket 17 containing the insert 18 (col. 2, lines 60-63, fig. 2), with an intermediate component 32 separate from the holder 12 and disposed within the cavity 31, the intermediate component 32 comprising an external peripheral surface 33 (col. 2, lines 60-63) and at least one expansion mechanism 44 (col. 3, lines 16-18), the external peripheral surface 33 engaging the insert 18 at the contiguous portion (col. 3, lines 11-14) and a wedging device 37 movably attached to the holder 12 and engaging the intermediate component 32 (col. 3, lines 1-7) such that actuation of the wedging device 37 results in expansion of the intermediate component 32 in a direction substantially parallel to a desired direction of the adjustment of the insert 18 (col. 3, lines 16-30).

In regard to claim 2, Basteck also teaches the expansion mechanism 44 comprises slots 47 and a tapered portion disposed in a first region (fig. 2, col. 3, lines 14-16) of an internal peripheral surface 35 of the intermediate component 32 (fig. 2, col. 2, lines 63-66).

In regard to claim 3, Basteck also teaches the wedging device 37 comprises a conical wedge 39 (fig. 2, col. 3, lines 1-7).

Art Unit: 3722

In regard to claim 5, Basteck also teaches the intermediate component 32 defines a portion of the pocket 17 side of the pocket 17 (fig. 2, col. 2, lines 60-63).

In regard to claim 6, Basteck also teaches the intermediate component 32 further comprises opposite end faces facing generally parallel to a direction of movement of the wedging device 37, each end face being intersected by at least one expansion element 44 (fig. 2, col. 3, lines 1-37).

In regard to claim 7, Basteck also teaches the actuation of the wedging device 37 causes expansion of the intermediate component 32 along substantially the entire length of the component 32 (fig. 2, col. 3, lines 1-37).

In regard to claim 20, Basteck teaches a method for adjusting the position of an insert 18 relative to a holder 12 wherein the tool body 12 has a pocket 17 having a floor and sides and a retaining device 19 for adjustably securing the insert to the holder 12 comprising the steps of positioning an insert 18 in the pocket 17 in engagement with a sleeve 32; the sleeve 32 including an end 34, an external peripheral surface 33 and at least one expansion mechanism 44; i.e., a hole 35 extending through the end 34 of the sleeve 32; the at least one expansion mechanism 44 comprising generally aligned slot portions 47 formed in the end 34 and separated from one another by the hole 35; the external peripheral surface 33 including a first portion engaging the insert and a second portion engaging a wall of the cavity disposed between the first and second portions of the external surface 33 (fig. 2); the hole 35 having a tapered portion 39 disposed adjacent the first portion of the external surface 33 (fig. 2), and a cylindrical portion 38 disposed adjacent the second portion 42 of the external surface 33 (fig. 2 and col. 3, lines 1-50). Basteck also teaches a tightening of the retaining device 19 to adjustably secure the insert in the pocket

Art Unit: 3722

17 (col. 2, lines 35-38); and inserting a wedging device 37 into the hole 35, the wedging device 37 exerting a wedging action against the tapered portion 39 of the hole surface thereby causing expansion of the first portion of the external surface 33, resulting in change of position of the insert 18 (col. 3, lines 1-50).

In regard to claim 21, Basteck also teaches the intermediate component 32 comprises a sleeve having a through-hole 35 extending there through, and through which the wedging element 37 extends (fig. 3, col. 3, lines 1-7).

In regard to claim 22, Basteck also teaches the through-hole 35 is defined by a surface (col. 3, line 4), a first portion of the surface located closest to the insert 18 being tapered correspondingly to a taper of the wedging element 37, a second portion of the surface located diametrically opposite the first portion being substantially cylindrical (fig. 2).

In regard to claim 25, Basteck also teaches the sleeve includes a plurality of sides together forming a polygonal shape (fig 2), a first side being disposed adjacent the first portion of the hole 35 face, and a second side being disposed opposite the first side and abutting a wall of the pocket 17 (fig. 2).

In regard to claim 26, Basteck also teaches the holder 12 comprises a rotatable tool body defining an axis of rotation (col. 3, lines 66-68).

In regard to claim 32, Basteck also teaches a retaining device 19 in holder 12 for adjustably securing the insert 18 (fig. 2, col. 2, lines 35-38), a cavity 31 formed in holder 12 and being at least partially contiguous with the pocket 17, the cavity including a wall situated opposite the pocket 17 (fig. 1). Basteck also teaches a sleeve 32 disposed in the cavity 31 and including opposite first and second ends and an external surface 33 extending between the first

Art Unit: 3722

and second sleeve ends, a hole 35 disposed in the sleeve 32 wherein a surface of the hole 35 defines an internal surface of the sleeve 32, a first portion of the external surface defining a flexing flank surface for engaging the insert 18, a second portion of the external surface being situated diametrically opposite the first portion and facing the wall of the cavity 31, a first portion of the internal surface being situated adjacent the external flexing surface and being tapered with respect to a center axis of the hole, a second portion of the internal surface being situated diametrically opposite the first portion and being cylindrically shaped, at least one of the sleeve ends including a pair of oppositely disposed slots 47 separated from one another by the hole 35, each slot 47 extending from the external surface to the internal surface and positioned between the first and second portions of the internal surface. Basteck also teaches an adjustment screw 37 including a wedge shaped portion (fig. 2) disposed in the hole 35 and engaging the first portion of the internal surface and the screw 37 being rotatable in a direction causing the sleeve 32 to expand at the slots 47 wherein the second portion of the external surface bears against the wall of the cavity 31 and the first portion of the external surface is displaced toward the insert to adjustably displace the insert.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 4, 23, 24, 27-31, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,391,023 (Basteck).

Art Unit: 3722

In regard to claim 4, Basteck teaches all aspects of the claimed invention as described in the above claim 1 rejection. Basteck also teaches the wedging device 37 includes an adjustment screw 38 threadingly engaged to the intermediate component (fig. 2, col. 3, lines 1-7). Basteck discloses the claimed invention except for the adjustment screw threadingly engaging the holder. It would have been an obvious matter of design choice to increase the size of the adjustment screw such that it continued on in length and threadingly engaged the holder, since such a modification would have involved a mere change in the size of the component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (SSPA 1955). Further more, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to threadingly engage the holder with the adjustment screw because Applicant has not disclosed that not engaging the holder with the adjustment screw provides an advantage, is used for a particular purpose or solves a stated problem.

In regard to claims 23 and 24, Basteck teaches all aspects of the claimed invention as described in the above claim 22 rejections. Basteck teaches the sleeve includes opposite ends through which the hole 35 extends with the top end 34 with a pair of oppositely facing slots 47 defining the expansion mechanism 44 (fig. 2). Basteck also teaches the sleeve includes a plurality of sides (fig. 2) forming a polygonal shape, a first side being disposed adjacent the first portion of the hole 35 surface and a second side being disposed opposite the first side and abutting against a wall of the pocket 17. Basteck does not teach the bottom end of the expansion mechanism with oppositely facing slots 47. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to include the



Art Unit: 3722

same slot 47 arrangement on the bottom end of the expansion mechanism as is used on the top end 34 of the expansion mechanism because the Applicant has not disclosed that having a bottom slot arrangement provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the top slot arrangement of Basteck because it is solving the problem of providing a wedging device against the insert. Therefore it would have been an obvious matter of design choice to modify Basteck to obtain the invention as described in claim 23.

In regard to claim 27, see claim 23 rejection above. Basteck also teaches a device for adjusting the position of a cutting insert 18 disposed within a pocket 17 of a holder 12 comprising a retaining device 19 in the holder 12 for adjustably securing the insert 18, a sleeve 32 disposed in a cavity 31 in the holder 12, the cavity 31 being at least partially contiguous with the pocket 17 (fig. 2), the sleeve 32 including opposite first and second ends and an external surface 33 extending between the first and second sleeve 32 ends, a through-hole 35 extending through the sleeve 32 from the first sleeve end to second sleeve end (fig. 2), a surface of the through-hole 35 defining an internal surface of the sleeve (fig. 2), a portion of the external surface defining a flexing flank surface for engaging a flank 46 of the insert 18 (fig. 2), the flexing flank surface having a length parallel to a center axis of the through-hole 35, a portion of the internal surface being situated adjacent the external flexing flank and being tapered with respect to the center axis, the first sleeve end including a first pair of oppositely disposed slots formed therein and separated from one another by the through-hole 35, each of the slots extending from the external surface to the internal surface, the first pair of slots being offset from

Art Unit: 3722

the second pair of slots in a direction perpendicular to the center axis. Basteck also teaches and adjustment screw 37 extending through the through-hole 35 and being threadingly connected to the holder 12, the screw including a wedge shaped portion disposed in the through-hole 35 and engaging the tapered surface portion of the internal surface adjacent the first and second sleeve ends such that rotation of the screw 37 in one direction causes the sleeve to expand at the first and pair of slots 47 in a direction toward the insert wherein the flexing flank surface is translationally displaced along its entire length toward the insert 18 for displacing the insert 18.

In regard to claim 28, Basteck teaches all aspects of the claimed invention as described in the above claim 27 rejections. Basteck also teaches a portion of the external surface disposed opposite the portion that engages the insert 18 is arranged to bear against a wall of the pocket 17 prior to termination of the expansion of the sleeve (fig. 2)

In regard to claim 29, Basteck teaches all aspects of the claimed invention as described in the above claim 28 rejections. Basteck also teaches the portion of the internal surface situated opposite the tapered portion thereof is substantially cylindrical (fig. 2, col. 3, lines 1-7).

In regard to claim 30, Basteck teaches all aspects of the claimed invention as described in the above claim 27 rejection. Basteck also teaches the holder 12 comprises a tool body defining an axis of rotation (col. 3, lines 66-68).

In regard to claim 31, Basteck teaches all aspects of the claimed invention as described in the above claim 27 rejection. Basteck also teaches the holder 12 comprises a cartridge 28 mounted in the tool body which defines an axis of rotation (col. 2, lines 53-58).

Basteck teaches all aspects of the claimed invention as described in the above claim 27-31 rejects except Basteck does not teach the bottom end of the expansion mechanism with

Art Unit: 3722

oppositely facing slots 47. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to include the same slot 47 arrangement on the bottom end of the expansion mechanism as is used on the top end 34 of the expansion mechanism because the Applicant has not disclosed that having a bottom slot arrangement provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the top slot arrangement of Basteck because it is solving the problem of providing a wedging device against the insert. Therefore it would have been an obvious matter of design choice to modify Basteck to obtain the invention as described in claim 27.

Art Unit: 3722

*Conclusion*

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,254,319 (Maier et al.) Friction and Vertical Cutting Tool

U.S. Pat. No. 4,692,069 (Kieninger) Cutter Head

U.S. Pat. No. 5,209,610 (Arai et al.) Throwaway Milling Cutter

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Ross whose telephone number is (703) 305-7764. The examiner can normally be reached on Mon-Fri 7:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (703) 308-2159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.



dmr

December 26, 2002



WILLIAM BRIGGS  
PRIMARY EXAMINER